

### Australian News.

Editor "The Farmer's Advocate":

The work of grading the seed wheat by the State Government, of New South Wales, which has undertaken to control this and next year's crop at a fixed price, is now going on. It will be a striking object lesson to the careless farmer who planted anything in years gone by. Though a great number grade, manure and fallow, there are many who do not do any of these things. It will be interesting to see if they will profit by the practical advice which will be forced upon them. Tests made in Victoria this season showed that graded seed increased the yield by fifteen per cent.

The year 1915 opens strangely. No one is even tolerably sure of their footing. The war has cast its shadow over everything. The changes which are forcing themselves upon the people are creating hardships. There is plenty opportunity here to launch out in the producing arena, but the disturbance is the trouble. When you ask bodies of men to change from one avenue to another the task is stupendous. There is great activity in the wheat districts, and scores are taking up farming as a loop-hole of escape from the dilemma. The State Governments are guaranteeing a fixed price for next season's grain, and bountiful rains have encouraged the enterprise of primary production.

The fruit-growers are wild at the treatment they are receiving from America, and they ask that the duty be increased five-fold to shut out the competition. They say that whereas the consumers here prefer the imported lemons to the local ones, owing to the get-up being better, that the Australian fruit is in turn boycotted on the American market. The excuse for refusing to handle the Australian stuff over there is that there is danger of introducing the fly, but they argue that there is comparatively little fly. It is for the American authorities to answer the charge that they are Trust-ridden, and for the Australian grower to say why it is that the imported fruit is so much better graded than his.

Australia has no practical knowledge of the consumption of horse-flesh, as in the countries of Europe, so it can be imagined what a surprise it was to hear that a company had made application to the authorities for permission to export this commodity—for use amongst the troops at the front. It seems that the application was made on behalf of a breeder who owns a large number of fat horses which are not of much use for ordinary purposes. It is against the law here to offer such food for sale, but there does not appear to be any reason why it should not go to those who care to eat it. There is a strong sentiment in Australia against this flesh for food purposes as well as an utter lack of taste, and people here cannot understand how any one could relish such a dish, but it is quite a different story on the Continent. When a horse becomes useless here in the cities he is slaughtered and sent to the Zoo, while in the country he is destroyed and buried with almost as much respect as that accorded a human being.

An Australian inventor has added another farm implement to the modern plant which bids fair to create a revolution in farm husbandry. It is a sub-soiler, or deep soil cutter, and a trial of it at the Hawkesbury College was witnessed by over 200 representative men of the land. The implement has a U-shaped blade, surrounded by a diamond-shaped frame, to which are attached plow-like handles, and which runs on three wheels. A lever raises or lowers the wheels to regulate the depth of the cutting blade. The latter is set at a particular angle, the effect of which drives it into the ground at starting, and continually lifts the disturbed soil as the machine moves along. In the trial six horses were hitched to the sub-soiler, which went through the soil at a depth of 18 inches as if it had been cutting cheese, and loosened it, raising the surface a couple of inches. A walking stick afterwards could be readily pushed to the full depth. Shovelling it out, it was found that the soil was thoroughly broken up. With another attachment a drain 9 inches deep was cut and cleaned out in the process, while yet another wing attachment to the blade threw the loosened soil on one side. The implement was afterwards attached to a double furrow plow, and sub-soiled the land to a depth of 10 inches below the furrow. There is no need to enlarge upon the value of an implement of this sort. Farmers were surprised at its efficiency. The inventor is Mr. Hoeg, of the Wagga State Farm.

The New South Wales Government is preparing to proceed with the construction of the Warra-gamba Basin Scheme, which will be the biggest thing in irrigation in the Southern Hemisphere. The water will be used by the City of Sidney and the farmers of Cumberland. The walls of the impounding dam will rise to a height of 275 feet, with a length in the widest part of 800 feet. This will conserve a total of 102 thousand million gallons of water. A tunnel of five miles in length will be employed to escort the water to the service mains. It is estimated that the scheme will cost £3,000,000. The land to be served is not of a high-class character, but being close to the city it can be very profitably used in the production of foodstuffs for the Metropolis. The science of irrigation is being made more attractive as a result of the success of other schemes in existence, and the recent dry spell which has created great hardships in the farming belts.

Australia

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### The Experience of Experts With Corn.

Before an audience of corn growers assembled recently at Chatham, Prof. C. A. Zavitz, of the Ontario Agricultural College, gave an interesting address on the question of corn for fodder and the silo. Although conditions at Guelph are somewhat different from those which exist in various parts of Ontario, nevertheless by testing different varieties year after year accurately, and in duplicate Prof. Zavitz has been able to arrive at conclusions which in a general way apply to corn growing in Ontario from Essex on the West to Prescott on the East, and Temiskaming on the North.

Another factor entering into experimental work with corn is the fact that corn cross-fertilizes and that the result of one year's crossing will very materially affect the results in future years. It is, therefore, necessary to procure new seed each year, as the cross-fertilization does not affect the season's crop further than making some change in the color of the kernels. Prof. Zavitz's words were directed chiefly to results obtained from experiments with the seven different varieties of corn which are being recommended for Ontario, namely, Salzer's North Dakota, White Cap Yellow Dent, Wisconsin No. 7, Compton's Early, Longfellow, Bailey and Golden Glow. Each of these varieties has been under test in the Ontario Agricultural College for a number of years along with a large number of other kinds. In these tests all varieties are planted under similar conditions, as to quality of soil, method of planting, date of planting, etc., and the tests were made in duplicate each year. The varieties were all harvested at the same time, and careful notes were taken regarding total yield, yield of ears, stage of maturity, etc.

The following table gives the average results in tons per acre per annum of ears, and of total green crop of the duplicate tests, for each of the five of the varieties for the period from 1905 to 1909 inclusive, and for each of six of the varieties for the period from 1910 to 1914.

Varieties	1st Period	2nd Period
Salzer's North Dakota.....	4.2	3.4
Smith's White Cap Yellow Dent.....	4.7	3.8
Wisconsin No. 7.....	—	3.7
Compton's Early.....	4.8	3.7
Longfellow.....	3.7	3.1
Bailey.....	4.4	—
Golden Glow.....	—	3.7

As Wisconsin No. 7 and the Golden Glow were not tested at the College previous to 1907 the results for these varieties are not inserted for the first period, and as the Bailey was dropped in 1912 the results of that variety could not be included for the last period. All seven varieties were under test at the College for six years from 1907 to 1912 inclusive. The following gives the average of twelve years in the six-year period of tons of ears and of tons of green crop per acre per annum. Salzer's North Dakota, 3.7 and 19.5; Smith's White Cap Yellow Dent, 4 and 18; Wisconsin No. 7, 4 and 17.8; Compton's Early, 4.1 and 17.4; Bailey, 3.8 and 16.7; Longfellow, 3.2 and 16, and Golden Glow, 4 and 15.2. The stage of maturity of the different varieties is very important. Very careful notes on this point were taken each year, and, as a result of the six-year test, it was found that the varieties came in the following order in date of maturity, starting with the earliest, Longfellow, Compton's Early, Salzer's North Dakota, Golden Glow, Smith's White Cap Yellow Dent, Bailey and Wisconsin No. 7.

In order to bring out the character of different strains of the same variety, investigation work was carried on with White Cap Yellow Dent corn secured from five different sources in southwestern Ontario, mostly in Essex County. These five lots were carefully tested in each of the

past five years. The average annual results of which are presented in the following table:

Strain of Corn	Height (inches)	Tons of Ears	Tons of Crop	Size of Ear (Ozs.)	Days to Tassel	Comparative Maturity
Hammond.....	90	3.3	12.1	7.3	81	92
Zavitz.....	98	3.7	14.9	8.0	84	82
Thomas.....	94	3.5	14.7	8.2	85	75
Dawson.....	99	3.1	13.4	7.6	87	68
Smith.....	102	3.7	16.4	8.5	89	58

In comparing this table with what has already been said it will be seen that Wisconsin No. 7 corn is later than the Smith's strain of White Cap Yellow Dent corn which is the latest of the five different strains of White Cap Yellow Dent, which have been under test at the Ontario Agricultural College. Prof. Zavitz explained the fact that details in corn work must be worked out under existing conditions where it concerns the grower, yet in a general way these tests apply universally throughout the province.

The discussion of the corn question was continued at the same meeting by G. I. Christie, of LaFayette, Ind. Mr. Christie laid particular emphasis on the little attention given to the corn crop, which is of such enormous value to farmers. The operations of selecting the proper cob, testing the seed and preparing it for the planter, were thoroughly discussed in a logical way. The speaker recommended not only selecting the cobs but selecting the kernels by taking a small lap-board and shelling first the tip and butt kernels from the cob, and discarding them for seed purposes. Then shelling the remainder of the corn on the cob into this board where the observer may see at once whether it is good or not. If it is not likely to grow and give rise to vigorous plants it is discarded altogether, if it is suitable for planting it is then graded into short and long kernels which are used at different times in the planter in order to ensure a more uniform planting of the seed.

Mr. Christie remarked that many growers were seeking to increase their yield by selecting very large cobs of corn, but he denounced this practice as unwise and advocated the medium-sized cob, one which would probably weigh about twelve ounces, was best for his State. In tests which they have conducted in the State of Indiana it was found that the cob of corn which was cylindrical and somewhat rough in its denting gave an average yield of 50.9 bushels per acre in a test extending over five years. The cylindrical, smooth-dented corn was somewhat lower in yield, amounting to approximately 47.9 bushels per acre. These yields per acre, of course, are not what are expected in the Ontario, but from a contest carried on in the State of Indiana larger yields are reported. The competitors endeavored to increase their crop economically through seed selection and thorough cul-

Varieties	Tons of Ears		Tons of Total Green Crop	
	1st Period	2nd Period	1st Period	2nd Period
Salzer's North Dakota.....	4.2	3.4	19.2	19.2
Smith's White Cap Yellow Dent.....	4.7	3.8	19.6	16.3
Wisconsin No. 7.....	—	3.7	—	16.3
Compton's Early.....	4.8	3.7	18.6	15.5
Longfellow.....	3.7	3.1	18.2	15.1
Bailey.....	4.4	—	16.7	—
Golden Glow.....	—	3.7	—	13.8

tivation. Following is a table showing the results of a number of contestants who carried on experimental work with corn.

#### COST OF PRODUCING CORN

Contestants	Yield per acre	Cost per acre, rental, fertilizer, and labor	Cost per bushel
No. 1.....	110.23	\$19.36	17.57
No. 2.....	106.65	18.99	17.81
No. 3.....	106.67	20.00	18.8
No. 4.....	100.34	19.52	19.4
No. 34.....	63.83	14.78	23.2
Average of 34 contestants.....	79.46	17.17	21.59
Ten-year average for Indiana.....	86.4	13.49	37.1

In this table it will be noticed that the cost per acre for corn in the State in an average test of ten years amounted to \$13.49.

It will be noticed from the table that it costs slightly more to produce a large crop of corn per acre than it does to produce a small crop, but the cost per bushel is less.